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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,799	12/02/2003	Yukoh Iwasaki	40030043-02	3346

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EXAMINER	
KRAMSKAYA, MARINA	
ART UNIT	**PAPER NUMBER**
2858	

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/725,799	IWASAKI ET AL.	
	Examiner	Art Unit	
	Marina Kramskaya	2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *07 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6,7 and 9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 6-7, 9* is/are rejected.

7)☒ Claim(s) *1 and 2* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 May 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1 and 2 are objected to because "the source and measure unit" has been replaced with "source major unit". However, the change has not been properly marked with a strike ~~tough~~ through the original portion and an underline of the newly amended portion. Amendments to the claims filed on or after July 30, 2003 must comply with 37 CFR 1.121(c) which states. The examiner will consider the "source major unit" as the "the source and measure unit" for the purposes of this examination.

V.N

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinds et al., US 5,629,628, in view of Sobolewski et al., US 6,069,484.

As per Claim 1, Hinds discloses a capacitance measurement system (**150**), heaving a test head comprising:

a plurality of input/output terminals (**110**) connected to a device under test (LAN cable **10** under test);

a measure unit (**150**);

a capacitance measurement unit (**150**) having an impedance measurement function (broadly interpreted as resistance measurement, see FIG. 5);

a switching matrix (**130, 140**) connected to the plurality of input/output terminals **110**, and measure unit **150**; and

an external controller (**180**) that is connected to the said test head and controls a test head controller (**160**).

Hinds does not explicitly teach a source major unit.

Sobolewski discloses a source major and measure (SMU) **10** supplying voltages or currents and the switching matrix **15** connected to the plurality of input/output terminals and the source and measure unit (SMU **10**).

Therefore, it would have been obvious to a person of ordinary skill in the art to have a source included in the measure unit, as taught by Sobolewski, in the system of Hinds, in order to supply power to the measurement system.

As per Claim 2, Hinds discloses the capacitance measurement system of claim 1, and Hinds further discloses the test head comprises the test head controller (**160**) that controls said measure unit (**150**), said capacitance measurement unit (**150**), and said switch matrix (**130, 140**).

Hinds does not explicitly disclose the test head controller that controls said source and measure unit.

Sobolewski discloses a controller (preamp **12**) that controls said source and measure unit (**10**).

Therefore, it would have been obvious to a person of ordinary skill in the art to have a controller that controls the source and measure unit, as taught by Sobolewski, the system of Hinds, in order to control the voltage supplied to the system.

4. Claims 3-4, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinds et al. in view of Sobolewski et al., as applied to claim 1 above, and further in view of Andeen et al., US 4,772,844.

As per Claim 3, Hinds further discloses the capacitance measurement system, wherein said test head comprises an external connection terminal (**110**) of said switching matrix (**130**, **140**), and said capacitance measurement unit and said switching matrix are connected via the external connection terminal (FIG. 5).

Hinds does not disclose a calibration terminal for the capacitance measurement unit and for connection to capacitance measurement unit and switching matrix.

Andeen discloses a calibration terminal (ABS., lines 7-9) for capacitance measurement.

Therefore, it would have been obvious to a person of ordinary skill in the art to include a calibration terminal, as taught by Andeen, in the measurement system of Hinds, in order to obtain more precise capacitance measurements.

As per Claims 4 and 7, Hinds, as modified, discloses the measurement system as applied to Claims 1 and 2 above.

Hinds, as modified, does not disclose a capacitance measurement unit that transmits an absolute value and phase of impedance of said device under test to said test head controller.

Andeen discloses capacitance measurement unit that transmits an absolute value and phase of impedance of said device under test to said test head controller (ie. processor) (column 2, lines 23-24, 37-39).

Therefore, it would have been obvious to a person of ordinary skill in the art to measure the capacitance in terms of absolute value and phase and report to the controller, as taught by Andeen, in the measuring system of Hinds, in order to record the precise capacitance measurements.

5. Claims 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinds et al. in view Sobolewski et al., as applied to claims 1 and 2above, and further in view of Kitayoshi, US 5,093,627.

Hinds, as modified, discloses the measurement system as applied to Claims 1 and 2 above.

Hinds, as modified, does not disclose a capacitance measurement unit that transmits a value of a real part and an imaginary part of an impedance of said device under test to said test head controller.

Kitayoshi, discloses a capacitance measurement unit (column 1, lines 6-8) that transmits a value of a real part and an imaginary part of an impedance of said device under test (column 2, lines 12-29) to said test head controller **240**.

Therefore, it would have been obvious to a person of ordinary skill in the art to transmit the measured impedance of the DUT as a real and an imaginary component to the controller, as taught by Kitayoshi, in the measurement system of Hinds as modified, in order to measure the impedance of the DUT with more precision.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Norton, US 5,844,412, and Van Der Weide et al., US 2002/0197709, disclose a capacitance measuring system with a test head controller and an external controller.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Kramskaya whose telephone number is (571)272-2146. The examiner can normally be reached on M-F 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571)272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marina Kramskaya
Examiner
Art Unit 2858

MK

V. Nguyen
9/19/2005
VINCENT Q. NGUYEN
PRIMARY EXAMINER